

REMARKS

Claims 1-18 are pending in the case. Claims 1-5 and 7-9 are rejected under 35 U.S.C. § 102(e) as being anticipated by Morrissey *et al.* (U.S. Patent Application Publication No. 2003/0206887 A1; hereafter "*Morrissey*"). Claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Morrissey*. Claims 1 and 5 are herein amended to delete certain sequences. Claims 7 and 8 are herein cancelled without prejudice. New claims 10-20 are herein added. Support for claims 10-18 can be found, for example, at page 29, line 26 through page 31, line 15; at page 31, line 27 through page 32, line 9; and Figure 2A. Support for claims 19 and 20 can be found, for example, at page 2, line 29 through page 3, line 3 and Figures 2B and 2C. No new matter has been introduced. Reconsideration of the present application is respectfully requested.

Claim Rejection under 35 U.S.C. § 102(e)

Claims 1-5 and 7-9 are rejected under 35 U.S.C. § 102(e) as being anticipated by *Morrissey*.

Specifically, the Office Action states that *Morrissey* teaches siRNA duplex molecules capable of mediating RNA interference against HBV expression, an expression vector containing a nucleic acid sequence encoding siNA molecule, and a treatment for an HBV related disease in humans with or without other therapeutic compounds, and at least the isolated nucleic acid molecule having the sequence of present SEQ ID NO:5.

Claims 7 and 8 are herein cancelled and, therefore, the rejection of claims 7 and 8 are now moot. Claims 1 and 5 are herein amended to delete SEQ ID NOS:5, 6, 8 and 9 as well as the phrase, "or a portion thereof".

Although *Morrissey* teaches use of siRNA duplex molecules for mediating RNA interference against HBV expression in general and lists numerous candidates for possible target sequences, only siRNA duplex of SEQ ID NOS:1338 and 1342 is shown to significantly inhibit the viral replication/activity compared to an inverted siRNA control (*see* Example 7 of *Morrissey*). The effectiveness of siRNA depends on a particular target gene as well as on a region of sequence within the target gene (*see* page 2, line 29 through page 3, line 3; and Figures 1B, 2B and 2C, of the present specification). In other words, vulnerability to siRNA varies depending on a *target sequence* as well as a target gene.

*Morrissey* does not specifically teach or suggest the target sequences of the present invention, in particular, the sequences of SEQ ID NOS:1, 2, 3, 4, 7 and 10, and that these sequences, among other possible sequences, significantly reduce the HBV RNA level as well as the HBV replication in the host cell, compared to a control host cell containing an empty vector, as demonstrated by the present invention (*see* Figures 2B and 2C of the present specification).

Accordingly, claims 1-5 and 9 are not anticipated by *Morrissey* and Applicants respectfully request that the rejection of claims 1-5 and 9 under 35 U.S.C. § 102(e) being anticipated by *Morrissey* be withdrawn.

**Claim Rejection under 35 U.S.C. § 103(a)**

Claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Morrissey*.

The Office Action acknowledges that *Morrissey* fails to specifically teach the administration of lamivudine and/or interferon in addition to one of the instantly

disclosed sequences, but that it would have been obvious to one of ordinary skill in the art to administer to a patient such a combination.

As discussed in the previous section, *Morrissey* does not specifically teach or suggest the target sequences of the present invention, in particular, the sequences of SEQ ID NOS:1, 2, 3, 4, 7 and 10, and that these sequences, among other possible sequences, significantly reduce the HBV RNA level as well as the HBV replication in the host cell, compared to a control host cell containing an empty vector (Figures 2B and 2C). Therefore, the treatment using a combination of the sequences recited in claim 5, from which claim 6 depends, and lamivudine and/or interferon is not obvious over *Morrissey*.

Accordingly, Applicants respectfully request that the rejection of claim 6 as being unpatentable over *Morrissey* be withdrawn.

#### **New Claims 10-20**

New claims 10-20 are herein added. No new matter has been introduced by the new claims. Claims 10-20 are all directly or indirectly dependent from claim 1, which, Applicants believe, is neither anticipated by nor unpatentable over *Morrissey* as discussed in the previous section.

Accordingly, claims 10-20 are neither anticipated by nor unpatentable over *Morrissey* as well.

In view of the foregoing amendments and remarks, Applicants believe all the pending claims are now in condition for allowance, early notification of which is earnestly requested.

No fee, other than, extension fees, is believed to be due for this submission.

Should any fee(s) be required, please charge such fee(s) to Deposit Account No. 50-2215.

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Respectfully submitted,

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